

In the claims:

For the Examiner's convenience, all pending claims are presented below with changes shown in accordance with the mandatory amendment format.

1. (Currently Amended) An apparatus, comprising:
a processor to execute a plurality of threads simultaneously, each thread including
a series of instructions and resulting in an event;
~~an event detector to detect a predetermined list of events and to transmit an event~~
~~detection signal to a multiplexer;~~
an event selection control register (ECSR) to instruct the multiplexer to:
select a class of ~~[[an]]~~ events from the predetermined list a group
of event~~[[s]]~~ signals issued from the processor; by filtering those events
~~that are not to be counted~~ and
select an event from the class of events by qualifying the event ~~that~~
~~is to be counted~~ based on a set of conditions, ~~wherein the qualifying of the~~
~~event is performed using~~ a thread ID and a thread current privilege level
(CPL), the thread ID indicating a source of the event, ~~the source including~~
a thread of the plurality of threads where the event occurred; and
an event counter to count the ~~qualified~~ event qualified by the multiplexer.
2. (Cancelled)
3. (Currently Amended) The apparatus of claim 1, wherein the ~~event register~~ ECSR
comprises a first field of bits to choose the event to be counted.
4. (Currently Amended) The apparatus of claim 1, wherein the ~~event register~~ ECSR
further comprises a second field of bits to choose the event to be masked and not
counted.

- 5-6. (Cancelled)
7. (Previously Presented) The apparatus of claim 1, wherein the event counter is stopped and cleared before a new event is selected.
8. (Previously Presented) The apparatus of claim 7, wherein the event counter is preset to a certain state.
9. (Currently Amended) The apparatus of claim 1, wherein the ~~predetermined list~~ class of events includes hardware performance and breakpoint events.
- 10-17. (Cancelled)
18. (Currently Amended) A method, comprising:
- executing a plurality of threads simultaneously, each thread including a series of instructions and resulting in an event;
- ~~detecting a predetermined list of events and transmitting an event detection signal to a multiplexer;~~
- instructing ~~[[the]]~~ a multiplexer to select ~~[[an]]~~ a class of events from a group of event signals issued from the processor ~~the predetermined list of events by filtering those events that are not to be counted; and~~
- instructing the multiplexer to select a class of events from the class of event signals by qualifying the event ~~that is to be counted~~ based on a set of conditions, wherein the qualifying of the event is performed using a thread ID and a thread CPL, the thread ID indicating a source of the event, ~~the source~~ including a thread of the plurality of threads where the event occurred;
- counting the event qualified by the multiplexer using an event counter; and
- accessing the event counter to determine a current count of the event.

19. (Cancelled)
20. (Currently Amended) The method in claim 18, wherein the qualifying [[of]] the event includes requiring that the event has a preselected thread ID.
21. (Currently Amended) The method in claim 20, wherein the qualifying [[of]] the event further includes requiring that the event has a preselected thread CPL.
- 22-26. (Cancelled)
27. (Previously Presented) The method of claim 18, wherein the thread CPL indicates a privilege level at which the thread at which the event occurred was operating when the event occurred.
28. (Previously Presented) The method of claim 20, wherein the preselected thread ID represents a thread of the plurality of threads where the event occurred.
29. (Previously Presented) The method of claim 21, wherein thread CPL indicates a privilege level at which the thread was operating at when the event occurred.
30. (Previously Presented) The apparatus of claim 1, wherein the thread CPL indicates a privilege level at which the thread at which the event occurred was operating when the event occurred.
31. (Previously Presented) The apparatus of claim 1, further comprising:
an event counter to count the event qualified by the multiplexer; and
an access location to allow access to the event counter to determine a current count of the event.
32. (Currently Amended) [[An]] A system, comprising:

a storage medium coupled with a processor, the processor to execute a plurality of threads simultaneously, each thread including a series of instructions and resulting in an event;

~~an event detector to detect a predetermined list of events and to transmit an event detection signal to a multiplexer;~~

an event selection control register (ESCR) to instruct the multiplexer to:

select a class of ~~[[an]]~~ events from the predetermined list a group of event~~[[s]]~~ signals issued from the processor ~~by selecting those events that are not to be counted~~; and

select an event from the class of events by qualifying the event that is to be selected ~~counted~~ based on ~~a set of conditions, wherein the qualifying of the event is performed using~~ a thread ID and a thread current privilege level (CPL), the thread ID indicating a source of the event, ~~the source~~ including a thread of the plurality of threads where the event occurred; and

an event counter to count the event qualified by the multiplexer; and

an access location to allow access to the event counter to determine a current count of the event.

33. (Previously Presented) The system of claim 32, wherein the access location allows access to determine the count without disturbing the operation of event counter.
34. (Currently Amended) The system of claim 33, wherein the ESCR ~~event register~~ comprises a first field of bits to choose the event to be counted.

35. (Currently Amended) The system of claim 34, wherein the ESCR event register further comprises a second field of bits to choose the event to be masked and not counted.
36. (Previously Presented) The system of claim 32, wherein the event counter is stopped and cleared before a new event is selected.
37. (Previously Presented) The system of claim 36, wherein the event counter is preset to a certain state.
38. (Currently Amended) The system of claim 32, wherein the ~~predetermined list~~ class of events includes hardware performance and breakpoint events.
39. (Previously Presented) The system of claim 32, wherein the thread CPL indicates a privilege level at which the thread at which the event occurred was operating when the event occurred.
40. (Currently Amended) A machine-readable medium having stored thereon data representing sets of instructions, the sets of instructions which, when executed by a machine, cause the machine to:
- execute a plurality of threads simultaneously, each thread including a series of
- instructions and resulting in an event;
- ~~detect a predetermined list of events and transmitting an event detection signal to~~
- ~~a multiplexer;~~
- instruct ~~[[the]]~~ a multiplexer to select ~~[[an]]~~ a class of events from a group of
- event signals issued from the processor; ~~the predetermined list of events~~
- ~~by filtering those events that are not to be counted; and~~

instruct the multiplexer to select a class of events from the class of event signals

by qualifying the event that is to be counted based on ~~a set of conditions,~~
~~wherein the qualifying of the event is performed using~~ a thread ID and a
thread CPL, the thread ID indicating a source of the event, ~~the source~~
including a thread of the plurality of threads where the event occurred;
count the event qualified by the multiplexer using an event counter; and
access the event counter to determine a current count of the event.

41. (Previously Presented) The machine-readable medium of claim 40, wherein the qualifying of the event includes requiring that the event has a preselected thread ID.
42. (Previously Presented) The machine-readable medium in claim 41, wherein the qualifying of the event further includes requiring that the event has a preselected thread CPL.
43. (Previously Presented) The machine-readable medium of claim 40, wherein the thread CPL indicates a privilege level at which the thread at which the event occurred was operating when the event occurred.
44. (Previously Presented) The machine-readable medium of claim 40, wherein the preselected thread ID represents a thread of the plurality of threads where the event occurred.
45. (Previously Presented) The machine-readable medium of claim 41, wherein thread CPL indicates a privilege level at which the thread was operating at when the event occurred.